

without elements aa and ab. These are not alternative embodiments. They are both elements of the fusion protein.

Claims 1-21 are pending. Applicant has amended claims 6, 8-11, 13, 14, 16 and 18 to revise the multiple dependent format. Claims 20-21 have been canceled in response to the restriction requirement.

Having made this election, Applicants expressly reserve the right to file one or more divisional applications on the subject matter of the non-elected claims. The election is made with traverse on the grounds that a search and examination of one or more of the specific groups set forth on pages 2 and 3 of the Restriction Requirement would not require an undue burden of searching.

Respectfully submitted,



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Marked-Up Claims

6. (Amended) The composition of [any one of] claim[s] 1 [to 5] wherein said amyloidogenic (poly)peptide self-assembles subsequent to release from said fusion protein.

8. (Amended) The composition of [any one of] claim[s] 1 [to 7] wherein said (poly)peptide defined in (aa) is glutathione S-transferase (GST), intein, thioredoxin, dihydrofolate reductase (DHFR) or chymotrypsin inhibitor 2 (CI2) or a functional fragment or derivative thereof.

9. (Amended) The composition of [any one of] claim[s] 1 [to 8] wherein said nucleic acid is DNA.

10. (Amended) The composition of [any one of] claim 1 [to 9] wherein said vector is an expression vector or a gene targeting vector.

11. (Amended) The composition of [any one of] claim[s] 1 [to 10] wherein said host is a bacterial, preferably an E. coli, an animal-, preferably a mammalian, an insect-, a plant-, a fungal, preferably a yeast- and most preferably a *Saccharomyces* or *Aspergillus* cell, a *Pichia pastoris* cell, a transgenic animal or a transgenic plant.

13. (Amended) The composition of [any one of] claim[s] 1 [to 12] wherein said antibody is a monoclonal antibody, polyclonal antibody, phage display antibody or a fragment or derivative thereof.

14. (Amended) An in vitro method of producing amyloid aggregates comprising  
(a) at least partially cleaving the fusion protein comprised in the composition of [any one of] claim[s] 1 [to 13] wherein the (poly)peptide that is released has the ability to self-assemble into amyloid-like fibrils or protein aggregates; or

(b) inducing self-assembly into amyloid-like fibrils or protein aggregates by heating the fusion protein comprised in the composition of [any one of] claim[s] 1 [to 13] or an amyloidogenic (poly)peptide that has the ability to self-assemble into amyloid-like fibrils or protein aggregates, by inducing a pH change in a solution comprising said fusion protein/(poly)peptide or by treating said fusion protein/(poly)peptide with a denaturing agent.

16. (Amended) A method of testing a prospective inhibitor of aggregate formation of a fusion protein as defined in the composition of [any one of] claim[s] 1 [to 13] when enzymatically or chemically cleaved or a non-cleaved fusion amyloidogenic (poly)peptide as defined in [any one of] claim[s] 1 [to 13] or an amyloidogenic non-fusion (poly) peptide comprising

- (a) incubating in the presence of a prospective inhibitor
- (aa) said fusion protein in the presence or absence of a cleaving agent; or
- (ab) said non-fusion poly(peptide); and
- (b) assessing the formation of amyloid-like fibrils or protein aggregates.

18. (Amended) A method for identifying an inhibitor of aggregate formation of a fusion protein as defined in [any one of] claim[s] 2 [to 6] prior to or after proteolytic or chemical cleavage or of a non-fusion amyloidogenic (poly)peptide that has the ability to self-assemble into amyloid-like fibrils or protein aggregates comprising

- (a) loading a surface or gel with said protein or an aggregate thereof;
- (b) incubating said surface or gel with a prospective inhibitor; and
- (c) assessing whether the presence of said prospective inhibitor avoids or reduces aggregate formation or further aggregate formation.